CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2007-0022

FINAL SITE CLEANUP REQUIREMENTS AND RESCISSION OF ORDER NO. 99-043 and ORDER NO. R2-2003-0071 FOR:

FORD AEROSPACE CORPORATION,
SPACE SYSTEMS/LORAL INC., and
FAR WESTERN LAND & INVESTMENT, INC.

for the properties located at

3963 and 3977 FABIAN WAY
PALO ALTO
SANTA CLARA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter the Board), finds that:

1. **Site Location**: The subject properties covered by this Order (hereinafter the Site) are located at 3963 and 3977 Fabian Way (also known as Buildings 7 & 8) in an industrial and mixed use area in the city of Palo Alto (Figure 1). It is bounded by the 901 San Antonio Road (Parcel 2) property on the east and north, the 844 East Charleston Road property to the south, and Fabian way to the west. San Francisco Bay is located approximately ¾ -mile to the north-northeast.

2. **Site History**: The Site is currently owned by Far Western Land and Investment, Inc., which leased the property from 1959 to 1990 to the former Ford Aerospace Corporation (FAC). FAC operated a research and development facility. Loral Aerospace Holdings, Inc. purchased the assets of Ford Aerospace Corporation in 1990 and was renamed Space Systems/Loral. There are two buildings that occupy portions of the Site; they are called Buildings 7 and 8. Operations included the use of chlorinated solvents in and around Buildings 7 and 8. Discharges to soil, affecting both soil and groundwater likely occurred through spills of chlorinated solvents. Space Systems/Loral currently uses the property for research and development of communication equipment.

3. **Named Dischargers**: The former Ford Aerospace Corporation is named as a discharger because of substantial evidence that it discharged pollutants to soil and groundwater at the Site, including its use of chlorinated solvents, primarily tetrachloroethene (PCE). Space Systems/Loral is named as a discharger because it is the current operator at the Site, and because it acquired FAC. Far Western Land and Investment, Inc. is named as a discharger because it owned the property during and after the time of the activity that resulted in the discharge, had knowledge of the discharge or the activities that caused the discharge, and had

the legal ability to prevent the discharge.[1] Far Western Land and Investment, Inc. will be responsible for compliance only if the Board or Executive Officer finds that other named dischargers have failed to comply with the requirements of this Order.

If additional information is submitted indicating that other parties caused or permitted any waste to be discharged on the Site where it entered or could have entered waters of the state, the Board will consider adding that party's name to this Order.

By private agreement, Ford Motor Company assumed responsibility from Loral Aerospace Holdings, Inc. for compliance with an earlier order (Order No. 89-137). This was described in a letter to the Board from Loral Aerospace Holdings, Inc. dated April 22, 1991. Since April 1991, Ford Motor Company has been the sole entity communicating with Board staff on behalf of Space Systems/Loral on matters related to site investigation and cleanup at the Site and to off-site affected properties.

4. **Regulatory Status**: This site has been subject to the following Board orders:

   - Site Cleanup Requirements (Order No. 89-137) adopted August 16, 1989.
   - Waste Discharge Requirements, NPDES Permit (Order No. 90-109) adopted August 15, 1990.
   - Amendment to Site Cleanup Requirements (Order No. 93-091) adopted August 18, 1993.
   - Site Cleanup Requirements (Order No. 96-023) adopted February 28, 1996.
   - Revised Site Cleanup Requirements (Order No. 99-043) adopted June 16, 1999.
   - Amendment to Site Cleanup Requirements (Order No. R2-2003-0071) issued August 8, 2003.

5. **Site Hydrogeology**: The Site is located in the San Jose sub-area of the South Bay Groundwater Basin. This area is characterized by a thick alluvial sequence, formed through deposition by streams descending from the Santa Cruz Mountains to the west and south, and is underlain by sediments of the Santa Clara Formation. The depth to groundwater in these upper, coalescing alluvial fans is approximately six to eight feet. Detailed cross-sections of the Site soil conditions are contained in the Subsurface Investigation Report, dated June 2004, prepared by Geomatrix on behalf of Ford Motor Company. Shallow stratigraphy at the Site is well characterized and consists of interbedded coarse and fine-grained units. Depth intervals comprising predominantly coarse-grained soils (water-bearing units), have been designated

[1] The current owner of the property (Far Western Land and Investment, Inc.) has the legal authority to prevent the ongoing discharge of pollutants to groundwater. On-going migration of contaminants through leaching from soil into groundwater and movement with the groundwater is also considered a release of contaminants to the environment. The State Board has adopted various orders (e.g., Zoecon Corp (WQ 86-2); Spitzer (WQ 89-8)) that establish that owners are responsible for discharges that are currently occurring on their property, even if the initial discharge occurred before they owned it or was caused by someone else (frequently a lessee).

from shallowest to deepest as the A-, B-, and C-Zones underneath the Site. Previous investigations have designated the A-Zone as two relatively continuous sand and gravel layers generally encountered between 5 and 30 feet bgs at depth intervals from 6 - 10 feet and 25 - 30 feet bgs. The underlying B-Zone has been divided into three subunits: (1) the B1-Zone, generally encountered between 22 and 40 feet bgs; (2) the B2-Zone, generally encountered between 31 and 50 feet bgs; and (3) the B3-Zone, generally encountered between 41 and 60 feet bgs. The C-Zone has been encountered between 80 and 90 feet bgs. The regional groundwater gradient is northeast toward San Francisco Bay. However, Site data provided by the Ford Motor Company indicates that the local groundwater gradient is toward the north.

6. **Remedial Investigation:** Starting in 1987, several investigations and groundwater monitoring events have taken place at the Site and adjacent properties. The highest PCE concentrations in groundwater were reported in samples collected beneath the 901 San Antonio Road (Parcel 2) property, immediately adjacent to the eastern Site property boundary (Figure 1). PCE-affected soil and groundwater beneath and downgradient (north) of this area have been associated with historical discharges of PCE from the Site. Impacts of PCE on the Site are minimal, as compared to the off-site impacts as described below. The results of the groundwater samples from on-site wells have been reported to contain PCE concentrations as high as 60 micrograms per liter (µg/l) (Well F8, third quarter 1995), but PCE concentrations have since declined to below the Maximum Contaminant Level (MCL) of 5 µg/l. Trichloroethene (TCE) concentrations as high as 21,000 µg/l (Well F25-2) have been reported (first quarter 2006); for reference, the MCL for both PCE and TCE is 5 µg/l. TCE in groundwater beneath the Site has been associated with the arrival of a TCE plume from an upgradient release, as documented by the steady increase in TCE concentrations in samples from monitoring Well F5, where concentrations increased from below detection limits in 1994 to 7,400 µg/l in 2003.

   PCE concentrations in soil and groundwater beneath the adjacent 901 San Antonio Road (Parcel 2) property are higher than underneath the Site itself, due to the reported discharge of PCE along the common boundary between these two properties. PCE concentrations as high as 31,000 µg/l (Well GCW 1-4 in November 2005) have been reported in groundwater samples from wells installed on the 901 San Antonio Road (Parcel 2) property within 40 feet of the Site, The depth of PCE contamination is approximately 60 feet beneath the 901 San Antonio Road (Parcel 2) property. The full extent of PCE associated with historical activities at the Site has been delineated.

   TCE was the most commonly detected VOC and was present at the highest concentrations in groundwater samples collected along the southern (upgradient) boundaries of both the Site and the adjacent 901 San Antonio Road (Parcel 2) property, as confirmed by a detailed 2004 groundwater investigation and subsequent groundwater investigations. The source(s) for TCE at these locations is believed to be upgradient and off-site to the south of both properties. The full extent of this TCE in groundwater at the Site has been determined;

however, the full extent of TCE affecting the adjacent 901 San Antonio Road (Parcel 2) property has not been determined. Another offsite TCE source(s) has impacted the area northwest of the Site. This source(s) is associated with detections of Freon 113.

The remedial investigation is complete; however, if additional VOCs related to a discharge from Buildings 7 and 8 are found in soil above the Board's Environmental Screening Levels during redevelopment of the adjacent 901 San Antonio Road (Parcel 2) property, additional remedial investigations, risk assessment, cleanup, and risk management may be required.

7. **Adjacent Sites**: There is known contamination on the adjacent upgradient properties. There are other nearby upgradient facilities associated with the use of similar VOCs. The former Advalloy facility, located immediately upgradient of the Site at 844 East Charleston Road is considered a source of chlorinated solvents (primarily TCE) in groundwater. The PCE release from the Site has affected the adjacent 901 San Antonio Road properties and the downgradient 3825 Fabian Way property.

   The Board adopted Site Cleanup Requirements for Advalloy in 1990 and revised these requirements on August 23, 1995, requiring investigation and cleanup at the former Advalloy site as appropriate. Monitoring well data indicate that groundwater pollution from the Advalloy site is impacting the Site, and the 3825 Fabian Way and 901 San Antonio Road properties. Advalloy is currently conducting in-situ interim remedial measures to address its groundwater pollution. There are other unknown off-site VOC sources south and southwest of the Site.

8. **Interim Remedial Measures:** In 1996, the extent of VOCs discharged from the 3963 and 3977 Fabian Way site, primarily PCE, in soil along the eastern boundary of the Site was defined and remediated as an interim remedial measure (IRM) by Ford Motor Company. The IRM involved excavation of VOC-affected soils for ex-situ treatment using a low-temperature thermal desorption process. Approximately 5,700 cubic yards of vadose zone soil were removed, treated and backfilled into the excavation area. These actions were approved by Board Order No. 96-023.

   In 2006, Ford Motor Company conducted additional interim soil remedial measures that minimized the downgradient migration of PCE from the Site and the off-site adjacent 901 San Antonio Road (Parcel 2) property. Approximately 1,008 cubic yards of vadose zone soil from the Site's eastern property line area (source zone) were excavated and disposed of off-site. In-situ bioremediation of source zone soil and groundwater impacted by PCE released at Buildings 7 and 8 was also conducted. The soil was cleaned up in accordance with environmental cleanup standards for protection of groundwater and direct exposure as contained in the Board's Environmental Screening Levels (February 2005).

   Ford Motor Company has also performed extensive voluntary interim remedial actions that have significantly reduced groundwater contamination both at the Site and off-site. A basement dewatering system beneath Building 5, located on the down gradient Space Systems/Loral

property at 3825 Fabian Way, has extracted groundwater continuously at flow rates ranging between 50 and 80 gallons per minute since the mid-1960s. Ford Motor Company and Space Systems/Loral are presently conducting hydraulic containment of the PCE impacted groundwater with the basement dewatering sump located at Building 5 of the 3825 Fabian Way property. Extracted water is being treated by granular activated carbon adsorption, and discharged under a NPDES permit. Groundwater modeling suggests that the extraction of groundwater from beneath Building 5 has been shown to effectively capture PCE impacted groundwater from the Building 7 and 8 Site (Figure 1). The basement dewatering system is needed for the continued operation of the satellite thermal-vacuum testing chamber, which is a critical component of Space Systems/Loral's business operations.

9. **Environmental Risk Assessment**: An environmental risk assessment was conducted for the adjacent 901 San Antonio Road (Parcel 2) property where significant impacts of PCE and other VOCs have been found. A risk management plan was prepared based on the potential future development related to PCE from the Site, and TCE and Freon 113 from other off-site sources. A risk assessment for the Site has not been performed.

10. **Feasibility Study**: A discussion of alternatives to mitigate impacts from the Site, as well as other off-site sources affecting the 901 San Antonio Road (Parcel 2) property are contained in the Site Cleanup Plan dated April 28, 2006, prepared by Geosyntec Consultants on behalf of the Taube-Koret Campus for Jewish Life (TKCJL). The remedial action alternatives considered for soil were 1) no action; 2) soil excavation with off-site disposal; and 3) soil excavation with on-site thermal treatment and replacement. The factors considered in the evaluation were 1) technical and administrative implementability; 2) effectiveness and achievement of cleanup objectives; and 3) cost. The selected soil cleanup alternative was soil excavation with off-site disposal. Groundwater cleanup alternatives were considered in the Final Groundwater Cleanup Plan dated May 26, 2006, prepared by Geomatrix Consultants on behalf of Ford Motor Company as discussed further in Finding 11.

11. **Final Groundwater Cleanup Plan:** In May 2006, Ford Motor Company voluntarily submitted the Final Groundwater Cleanup Plan. The final cleanup measures for groundwater include: vadose zone soil excavation to remove residual VOCs in vadose zone soil which could potentially continue to affect shallow groundwater quality; partial source zone remediation to mitigate residual PCE in saturated soil and increase the source attenuation rate; and installation of a permeable reactive barrier (PRB) composed of zerovalent iron downgradient of the Site source zone near and along the northern property boundary of the 901 San Antonio Road (Parcel 2) site (Figure 1). The Final Groundwater Cleanup Plan also consists of temporary treatment and disposal of groundwater extracted by the downgradient Building 5 basement dewatering sump, as described in Finding 8. Continued monitoring of on-site and off-site monitoring wells was proposed to evaluate the effectiveness of this Final Groundwater Cleanup Plan. Board staff approved the Final Groundwater Cleanup Plan on June 22, 2006. Board staff, in a letter dated August 3, 2006, also approved the Permeable Reactive Barrier Design and Installation Plan dated July 24, 2006, submitted on a voluntary basis by Ford Motor Company.

12. **Basis for Cleanup Standards:**

a. **General:** State Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," applies to this discharge and requires attainment of background levels of water quality, or the highest level of water quality which is reasonable if background levels of water quality cannot be restored. Cleanup levels other than background must be consistent with the maximum benefit to the people of the State, not unreasonably affect present and anticipated beneficial uses of such water, and not result in exceedance of applicable water quality objectives. The previously-cited Final Groundwater Cleanup Plan confirms the Board's initial conclusion that background levels of water quality cannot be restored. This order and its requirements are consistent with Resolution No. 68-16.

State Board Resolution No. 92-49, "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304," applies to this discharge. This order and its requirements are consistent with the provisions of Resolution No. 92-49, as amended.

b. **Beneficial Uses**: The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) on June 21, 1995. This updated and consolidated plan represents the Board's master water quality control planning document. The revised Basin Plan was approved by the State Water Resources Control Board and the Office of Administrative Law on July 20, 1995, and November 13, 1995, respectively. A summary of regulatory provisions is contained in Title 23, California Code of Regulations, Section 3912. The Basin Plan defines beneficial uses and water quality objectives for waters of the State, including surface waters and groundwaters.

Board Resolution No. 89-39, "Sources of Drinking Water," defines potential sources of drinking water to include all groundwater in the region, with limited exceptions for areas of high TDS, low yield, or naturally-high contaminant levels. Groundwater underlying and adjacent to the Site qualifies as a potential source of drinking water.

The Basin Plan designates the following potential beneficial uses of groundwater underlying and adjacent to the Site:

- Municipal and domestic water supply
- Industrial process water supply
- Industrial service water supply
- Agricultural water supply

At present, there is no known use of groundwater underlying the Site for the above purposes.

c. **Basis for Groundwater Cleanup Standards**: The groundwater cleanup standards, as shown in Section B.2 below, are based on applicable water quality objectives and are the more stringent of EPA and California primary maximum contaminant levels (MCLs). Cleanup to this level will protect beneficial uses of groundwater and will result in acceptable residual risk to humans.

13. **Future Changes to Cleanup Standards**: The goal of this remedial action is to restore the beneficial uses of groundwater underlying and adjacent to the Site. Results from other sites suggest that full restoration of beneficial uses to groundwater as a result of active remediation at this Site may not be possible. If full restoration of beneficial uses is not technologically or economically achievable within a reasonable period of time, then the discharger may request modification to the cleanup standards or establishment of a containment zone, a limited groundwater pollution zone where water quality objectives are exceeded. Conversely, if new technical information indicates that cleanup standards can be surpassed, the Board may decide that further cleanup actions should be taken.

14. **Basis for 13304 Order**: California Water Code Section 13304 authorizes the Board to issue orders requiring a discharger to cleanup and abate waste where the discharger has caused or permitted waste to be discharged or deposited where it is or probably will be discharged into waters of the State and creates or threatens to create a condition of pollution or nuisance.

15. **Cost Recovery**: Pursuant to California Water Code Section 13304, the dischargers are hereby notified that the Board is entitled to, and may seek reimbursement for, all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this order.

16. **CEQA**: This action is an order to enforce the laws and regulations administered by the Board. As such, this action is categorically exempt from the provisions of the California Environmental Quality Act (CEQA) pursuant to Section 15321 of the Resources Agency Guidelines.

17. **Notification**: The Board has notified the discharger and all interested agencies and persons of its intent under California Water Code Section 13304 to prescribe Site Cleanup Requirements for the discharge, and has provided them with an opportunity to submit their written comments.

18. **Public Hearing**: The Board, at a public meeting, heard and considered all comments pertaining to this discharge.

IT IS HEREBY ORDERED, pursuant to Section 13304 of the California Water Code, that the dischargers (or their agents, successors, or assigns) shall cleanup and abate the effects (on-site downgradient, and off-site) described in the above findings as follows:

A. PROHIBITIONS

1. The discharge of wastes or hazardous substances in a manner which will degrade water quality or adversely affect beneficial uses of waters of the State is prohibited.

2. Further significant migration of wastes or hazardous substances originating at the site through subsurface transport to waters of the State is prohibited.

3. Activities associated with the subsurface investigation and cleanup which will cause significant adverse migration of wastes or hazardous substances or cause a nuisance condition under the Water Code are prohibited.

B. FINAL GROUNDWATER CLEANUP PLAN AND CLEANUP STANDARDS

1. **Implement Final Groundwater Cleanup Plan**: The dischargers shall implement the Final Groundwater Cleanup Plan as described in Finding 11 according to the time schedule contained in Section C of this Order.

2. **Groundwater Cleanup Standards**: The dischargers shall meet the following cleanup standards in groundwater impacted by discharges at the Site, including impacted groundwater at the 901 San Antonio Road properties and downgradient properties:

Constituent	Standard (ug/l)	Basis
PCE	5 ug/l	EPA primary MCL
TCE	5 ug/l	EPA primary MCL
cis 1,2- DCE	6 ug/l	CA primary MCL
trans 1,2- DCE	10 ug/l	CA primary MCL
Vinyl Chloride	0.5 ug/l	EPA primary MCL

C. **TASKS**

1. **FINAL GROUNDWATER CLEANUP PLAN IMPLEMENTATION REPORTING**

COMPLIANCE DATE: JUNE 1, 2007 and monthly thereafter

Monthly progress reports shall be submitted until completion of all measures contained in the Final Groundwater Cleanup Plan as documented in a Completion Report acceptable to the Executive Officer.

2. **MONITORING PROGRAM FOR IN-SITU STRUCTURAL REMEDIAL MEASURES (e.g., PERMEABLE REACTIVE BARRIER)**

COMPLIANCE DATE: JUNE 1, 2007

Submit a monitoring and inspection program (including water levels and water quality monitoring) acceptable to the Executive Officer documenting the performance wells and program to be implemented to monitor the effectiveness of the in-situ permeable reactive barrier.

3. **RISK ASSESSMENT AND PROPOSED INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: SEPTEMBER 15, 2007

Submit a technical report acceptable to the Executive Officer documenting the results of a human health risk assessment. The report shall include the procedures used by the dischargers to evaluate the need for risk management measures. The

report shall evaluate the effects of soil and groundwater impacts at and/or near the Site. Such procedures shall include a deed restriction prohibiting the use of shallow groundwater as a source of drinking water at the Site.

4. **IMPLEMENTATION OF INSTITUTIONAL CONSTRAINTS**

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting that the required deed restriction has been recorded.

5. **PROPOSED ADDITIONAL INVESTIGATIONS AND CLEANUP MEASURES**

COMPLIANCE DATE: 60 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new VOC data obtained from 901 San Antonio Road (Parcel 2), and summarizing any additional investigations or cleanup actions that may be necessary. The Executive Officer would invoke this task in the event that the property owner of the adjacent 901 San Antonio Road (Parcel 2) property discovers additional VOC releases that originated from the Building 7 and 8 Site in vadose zone soils or groundwater at levels greater than Cleanup Standards specified in B.2 of this Order during redevelopment for the 901 San Antonio Road (Parcel 2) property.

6. **FIVE-YEAR STATUS REPORT**

COMPLIANCE DATE: JANUARY 30, 2011, and every five years thereafter

Submit a technical report acceptable to the Executive Officer evaluating the effectiveness of the Final Groundwater Cleanup Plan. The report should include:

a. Summary of effectiveness in controlling contaminant migration and protecting human health and the environment;
b. Comparison of contaminant concentration trends with cleanup standards;
c. Comparison of anticipated versus actual costs of cleanup activities;
d. Performance data (e.g., groundwater volume extracted, chemical mass removed, mass removed per million gallons extracted, monitoring of potential groundwater level increases;)
e. Cost effectiveness data (e.g., cost per pound of contaminant removed);
f. Summary of additional investigations (including results) and significant modifications to remediation systems; and

g. Additional remedial actions proposed to meet cleanup standards (if applicable) including time schedule.

If cleanup standards have not been met and are not projected to be met within a reasonable time, the report should assess the technical practicability of meeting cleanup standards and may propose an alternative cleanup strategy.

7. **PROPOSED CURTAILMENT**

COMPLIANCE DATE: 60 days prior to proposed curtailment

Submit a technical report acceptable to the Executive Officer containing a proposal to curtail remediation. Curtailment includes system closure (e.g., well abandonment), system suspension (e.g., cease extraction but wells retained), and significant system modification (e.g., major reduction in extraction rates, closure of individual extraction wells within extraction network). The report should include the rationale for curtailment. Proposals for final closure should demonstrate that cleanup standards have been met, contaminant concentrations are stable, and contaminant migration potential is minimal.

8. **IMPLEMENTATION OF CURTAILMENT**

COMPLIANCE DATE: 60 days after Executive Officer approval

Submit a technical report acceptable to the Executive Officer documenting completion of the tasks identified in Task 7, including proper decommissioning of all remediation equipment. (the curtailment tasks may be subdivided if desired - e.g. soil vapor extraction and groundwater extraction).

9. **EVALUATION OF NEW HEALTH CRITERIA**

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating the effect on the approved Final Groundwater Cleanup Plan of revising one or more cleanup standards in response to revision of drinking water standards, maximum contaminant levels, or other health-based criteria.

10. **EVALUATION OF NEW TECHNICAL INFORMATION**

COMPLIANCE DATE: 90 days after requested by Executive Officer

Submit a technical report acceptable to the Executive Officer evaluating new technical information which bears on the approved Final Groundwater Cleanup Plan and cleanup standards for this Site. In the case of a new cleanup technology, the report should evaluate the technology using the same criteria used in the feasibility study. Such technical reports shall not be requested unless the Executive Officer determines that the new information is reasonably likely to warrant a revision in the approved remedial action plan or cleanup standards.

11. Delayed Compliance: If the dischargers are delayed, interrupted, or prevented from meeting one or more of the completion dates specified for the above tasks, the dischargers shall promptly notify the Executive Officer, and the Board may consider revision to this Order.

D. PROVISIONS

1. **No Nuisance:** The storage, handling, treatment, or disposal of polluted soil or groundwater shall not create a nuisance as defined in California Water Code Section 13050(m).

2. **Good O&M**: The dischargers shall maintain in good working order and operate as efficiently as possible any facility or control system (including the permeable reactive barrier) installed to achieve compliance with the requirements of this Order, and shall prevent adverse impacts to off-site properties. In the event the dischargers become aware of adverse effects of any remedial measures installed, the dischargers shall submit a technical report to the Executive Officer within 90 days of detection that contains the proposed actions to mitigate the adverse effects.

3. **Cost Recovery**: The dischargers shall be liable, pursuant to California Water Code Section 13304, to the Board for all reasonable costs actually incurred by the Board to investigate unauthorized discharges of waste and to oversee cleanup of such waste, abatement of the effects thereof, or other remedial action, required by this Order. If the site addressed by this Order is enrolled in a State Board-managed reimbursement program, reimbursement shall be made pursuant to this Order and according to the procedures established in that program. Any disputes raised by the dischargers over reimbursement amounts or methods used in that program shall be consistent with the dispute resolution procedures for that program.

4. **Access to Site and Records**: In accordance with California Water Code Section 13267(c), the dischargers shall permit the Board or its authorized representative:

a. Entry upon premises in which any pollution source exists, or may potentially exist, or in which any required records are kept, which are relevant to this Order.

b. Access to copy any records required to be kept under the requirements of this Order.

c. Inspection of any monitoring or remediation facilities installed in response to this Order.

d. Sampling of any groundwater or soil which is accessible, or may become accessible, as part of any investigation or remedial action program undertaken by the discharger.

5. **Self-Monitoring Program**: The dischargers shall comply with the Self-Monitoring Program as attached to this Order and as may be amended by the Executive Officer.

6. **Contractor / Consultant Qualifications**: All technical documents shall be signed by and stamped with the seal of a California registered geologist, a California certified engineering geologist, or a California registered civil engineer.

7. **Lab Qualifications**: All samples shall be analyzed by State-certified laboratories or laboratories accepted by the Board using approved EPA methods for the type of analysis to be performed. All laboratories shall maintain quality assurance/quality control (QA/QC) records for Board review. This provision does not apply to analyses that can only reasonably be performed on-site (e.g., temperature).

8. **Document Distribution**: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the following agencies:

   a. City of Palo Alto
   b. County of Santa Clara
   c. Santa Clara Valley Water District

   The Executive Officer may modify this distribution list as needed.

9. **Reporting of Changed Owner or Operator**: The dischargers shall file a technical report on any changes in site occupancy or ownership associated with the property described in this Order.

10. **Reporting of Hazardous Substance Release**: If any hazardous substance is discharged in or on any waters of the State, or discharged or deposited where it is, or probably will be, discharged in or on any waters of the State, the dischargers shall report such discharge to the Board by calling (510) 622-2369 during regular office hours (Monday through Friday, 8:00 to 5:00).

    A written report shall be filed with the Board within five working days. The report shall describe: the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

    This reporting is in addition to reporting to the Office of Emergency Services required pursuant to the Health and Safety Code.

11. **Secondarily-Responsible Discharger**: Within 60 days after being notified by the Executive Officer that other named dischargers have failed to or are unable to comply with this Order or parts of this Order, Far Western Land and Investment Inc. as property owner shall then be responsible for complying with this Order or parts of the Order. Task deadlines above will be automatically adjusted to add 60 days.

12. **Rescission of Existing Orders**: This Order supersedes and rescinds Order No. 99-043 and Order No. R2-2003-0071.

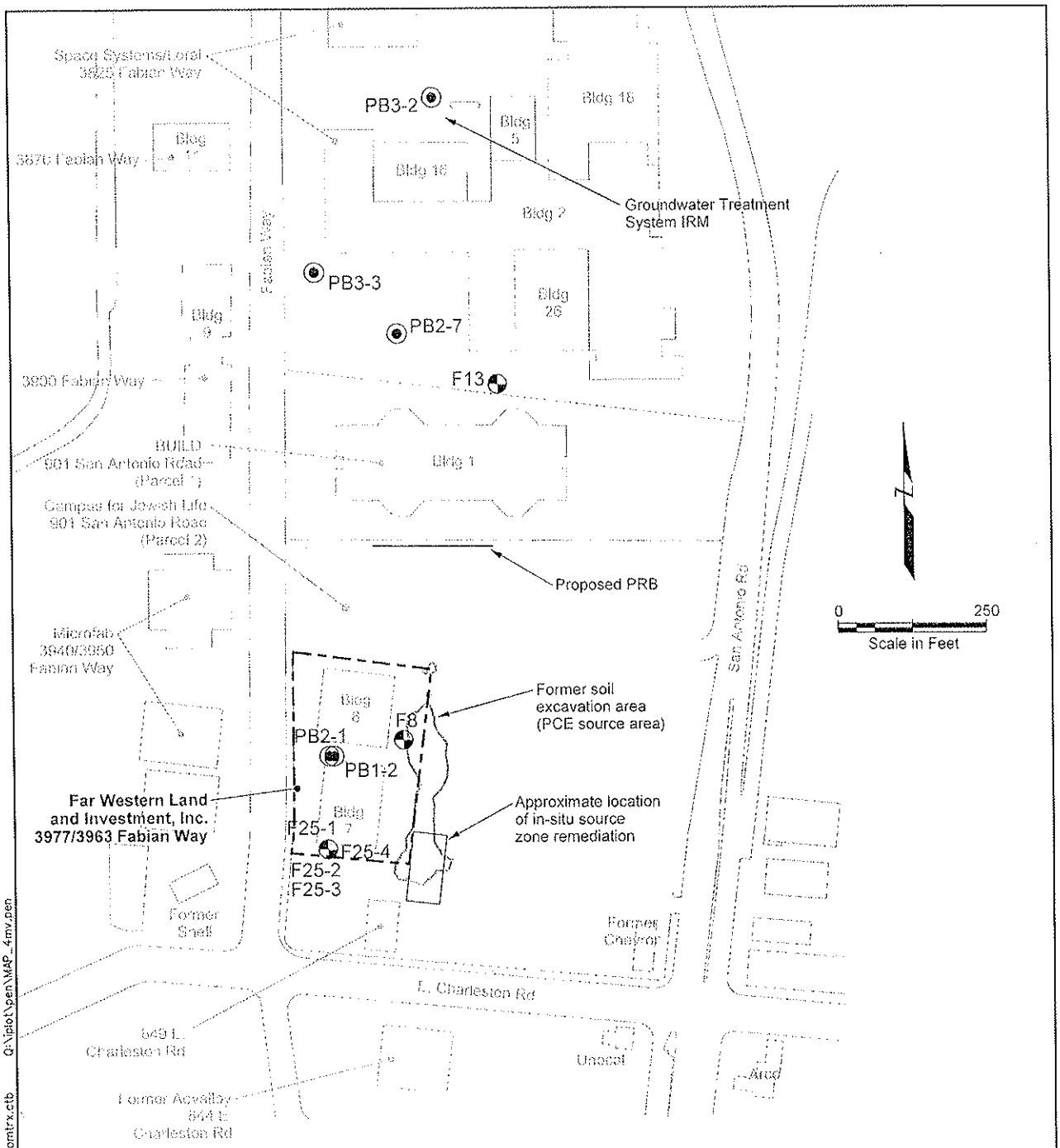
13. **Periodic Order Review**: The Board will review this Order periodically and may revise it when necessary.

I, Bruce H. Wolfe, Executive Officer, do hereby certify that the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on March 14, 2007.

Bruce H. Wolfe
Executive Officer

FAILURE TO COMPLY WITH THE REQUIREMENTS OF THIS ORDER MAY SUBJECT YOU TO ENFORCEMENT ACTION, INCLUDING BUT NOT LIMITED TO: IMPOSITION OF ADMINISTRATIVE CIVIL LIABILITY UNDER WATER CODE SECTIONS 13268 OR 13350, OR REFERRAL TO THE ATTORNEY GENERAL FOR INJUNCTIVE RELIEF OR CIVIL OR CRIMINAL LIABILITY

Attachments: Site Map
Self-Monitoring Program



EXPLANATION

F4 — Approximate location of project monitoring well

PB3-2 — Approximate location of project piezometer

— — — — — Approximate location of property lines

SITE PLAN
3977 and 3963 Fabian Way and Nearby Properties
Palo Alto, California

By:	Date: 08-NOV-2006	Project No. 3311
Geomatrix		Figure 1

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM FOR:

FORD AEROSPACE CORPORATION,
SPACE SYSTEMS/LORAL, INC., and
FAR WESTERN LAND & INVESTMENT, INC.

for the properties located at

3963 and 3977 FABIAN WAY
PALO ALTO
SANTA CLARA COUNTY

1. **Authority and Purpose**: The Board requests the technical reports required in this Self-Monitoring Program pursuant to Water Code Sections 13267 and 13304. This Self-Monitoring Program is intended to document compliance with Board Order No. R2-2007-0022 (Site Cleanup Requirements).

2. **Monitoring**:

   a. The dischargers shall measure groundwater elevations semi-annually in all monitoring wells, and shall collect and analyze representative samples of groundwater according to the following schedule:

Well #	Sampling Frequency	Analyses	Well #	Sampling Frequency	Analyses
F-8	SA	8260	F-13	SA	8260
PB1-2	SA	8260	PB2-1	SA	8260
PB2-7	SA	8260	PB3-2	SA	8260
PB3-3	SA	8260	F-25-1	SA	8260
F-25-2	SA	8260	F-25-3	SA	8260
F-25-4	SA	8260			

Key: SA = Semi-Annually (First and Third Quarter) 8260 = EPA Method 8260 or equivalent

b. The dischargers shall sample and measure water levels at any new monitoring or extraction wells semi-annually, and analyze groundwater samples for the same constituents as shown in the above table.

c. The dischargers may propose changes in the above table; any proposed changes are subject to Executive Officer approval.

3. **Semi-Annual Monitoring Reports**: The dischargers shall submit semi-annual monitoring reports to the Board no later than 30 days following the end of the sampling period (e.g., first report due April 30, and the second report due October 31). The reports shall include:

a. Transmittal Letter: The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall be signed by the dischargers' principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

b. Groundwater Elevations: Groundwater elevation data shall be presented in tabular form, and a groundwater elevation map should be prepared for each monitored water-bearing zone. Historical groundwater elevations shall be included in the second semi-annual report each year.

c. Groundwater Analyses: Groundwater sampling data shall be presented in tabular form, and an isoconcentration map should be prepared for one or more key contaminants for each monitored water-bearing zone, as appropriate. The report shall indicate the analytical method used, detection limits obtained for each reported constituent, and a summary of QA/QC data. Historical groundwater sampling results shall be included in the second semi-annual report each year. The report shall describe any significant increases in contaminant concentrations since the last report, and any measures proposed to address the increases. Supporting data, such as lab data sheets, need not be included (however, see record keeping - below).

d. Groundwater Extraction: If applicable, the report shall include groundwater extraction results in tabular form, for each extraction well and for the Site as a whole, expressed in gallons per minute and total groundwater volume for the quarter. The report shall also include contaminant removal results, from groundwater extraction wells and from other remediation systems (e.g., soil vapor extraction), expressed in units of chemical mass per day and mass for the reporting period. If applicable, historical mass removal results shall be included in the semi-annual reports.

e. Status Report: The semi-annual reports shall describe relevant work completed during the reporting period (e.g., groundwater cleanup measures) and work planned for the following reporting period.

4. **Violation Reports**: If the dischargers violate requirements in the Site Cleanup Requirements, then the dischargers shall notify the Board office by telephone as soon as practicable once the dischargers have knowledge of the violation. Board staff may, depending on violation severity, require the dischargers to submit a separate technical report on the violation within five working days of telephone notification.

5. **Other Reports**: The dischargers shall notify the Board in writing prior to any site activities, such as construction or underground tank removal, which have the potential to cause further migration of contaminants or which would provide new opportunities for site investigation.

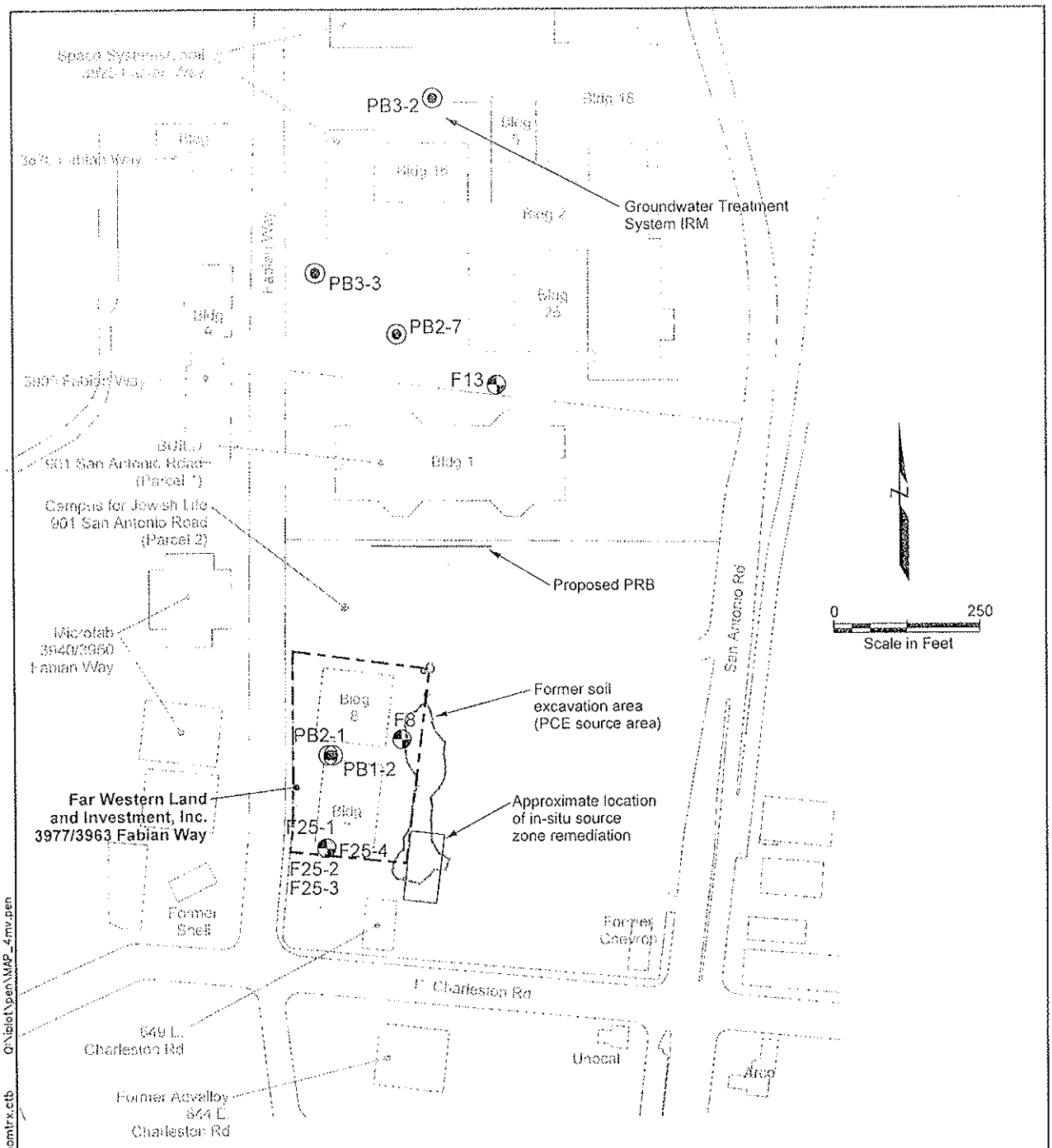
6. **Record Keeping**: The dischargers or their agent shall retain data generated for the above reports, including lab results and QA/QC data, for a minimum of six years after origination and shall make them available to the Board upon request.

7. **SMP Revisions**: Revisions to the Self-Monitoring Program may be ordered by the Executive Officer, either on his/her own initiative or at the request of the discharger. Prior to making SMP revisions, the Executive Officer will consider the burden, including costs, of associated self-monitoring reports relative to the benefits to be obtained from these reports.

I, Bruce H. Wolfe, Executive Officer, hereby certify that this Self-Monitoring Program was adopted by the Board on March 14, 2007.

Bruce H. Wolfe
Executive Officer

Attachments: Monitoring Well Location Map



EXPLANATION

F4 — Approximate location of project monitoring well

PB3-2 — Approximate location of project piezometer

Approximate location of property lines

Monitoring Well Location Map

3977 and 3963 Fabian Way and Nearby Properties
Palo Alto, California

By:	Date: 08-NOV-2006	Project No. 3311
Geomatrix		Figure 1

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